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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,002	08/18/2006	Mordekhai Velger	BKE0007US	5153
23413 7590 09/16/2010 CANTOR COLBURN LLP 20 Church Street 22nd Floor Hartford, CT 06103				
EXAMINER TRA, TUYEN Q				
ART UNIT 2873		PAPER NUMBER		
NOTIFICATION DATE 09/16/2010		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

### Office Action Summary

**Application No.**

10/554,002

**Applicant(s)**

VELGER ET AL.

**Examiner**

TUYEN Q. TRA

**Art Unit**

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 June 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-14 is/are rejected.
- 7) ☒ Claim(s) 2, 3, 15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4-14, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Elsner et al.(DE19728598 translation; of record).

With respect to claim 1, Elsner et al. discloses a plurality of masses (elements 8 and 7 of Figure 1), at least one of said masses comprising a light processing module (element 7 of Figure 1), at least one force producing element (element 9 coupled with element 7 of Figure 1) coupled to at least one of said masses, said at least force producing element applying at least one force to at least one said masses; and a plurality of elastic elements (i.e. spring element 5, element 6, element 20 and element 21 of Figure 1), said elastic elements coupling said masses (elements 8, 9 and 7 of Figure 1) together, said elastic elements (element 5 and 6 of Figure 1) coupling at least one of said masses to at least one support (3 and 4 of Figure 1) wherein the mass values (any predetermined value) of said masses, the force value (any predetermined force value) of said at least one force and the stiffness coefficients (any predetermined stiffness coefficient value) of said elastic elements, are selected such that said light processing module oscillates according to a predetermined (any) waveform (i.e. basic definition given to geometric-waveform)(page 2, lines 50-61).

With respect to claims 4 and 5, Elsner further discloses wherein triangular waveform is not symmetric; the light processing module (7) reflects light (because element 7 is a mirror).

With respect to claim 6, Elsner further discloses wherein the light processing module (7) oscillates in an oscillatory motion spatially.

With respect to claim 7, Elsner further discloses wherein the force producing elements (3, 4) is electrostatic element (electrodes).

With respect to claim 8, Elsner further discloses wherein the one force producing element (3, 4) is located the support.

With respect to claim 9, Elsner further discloses wherein each of the masses (8, 9), the force producing element (3, 4), and the elastic elements (20, 21) are incorporated with a micro-electromechanical system (1 of Figure 1).

With respect to claim 10, Elsner further discloses wherein the light processing module (7) is located between respective two of said masses (8 and 9 of Figure 1).

With respect to claim 11, Elsner further discloses wherein a first group of the mass (8) and a second group of the mass (9) are symmetrically located at two sides of the light processing module (7).

With respect to claim 12, Elsner further discloses wherein a selected mass (8) of the first group and a respective mass (9) of said second group, are located at opposite sides of said light processing module (7), said selected mass (8) and respective mass (9) having substantially the same geometric and physical characteristics.

With respect to claim 13, Elsner further discloses wherein the mass (8, 9) and the elastic elements (20, 21) are located between two of the respective the one support.

With respect to claim 14, Elsner further discloses wherein the densities of said masses (8, 9) and said elastic elements (20, 21) are substantially the same.

With respect to claims 17 and 18, Elsner further discloses wherein the geometric-waveform oscillator substantially as illustrated in any of the drawings.

***Response to Arguments***

3. Applicant's arguments filed 06/18/2010 have been fully considered but they are not persuasive.

With respect to independent claim 1, Applicant argues that Elsner fails to teach or suggest a plurality of masses included with an oscillator and coupled with force producing elements (in Remark, page 6).

Examiner disagrees because there is not any oscillator discloses in the claim body except in preamble. Therefore, the recitation that has not been given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. *Kropa v. Robie*, 88 USPQ 478 (CCPA 1951).

Applicant further argues that "These elements 8 and 9 have no mass property whatsoever, and cannot function as both a mass and a force element coupled thereto, as required by Applicant's claims."

Examiner disagrees with the argument. The actuator element 8 or 9 does have a mass property in order to rotate the mirror 7. In addition, Examiner clearly states in office action that

"at least one force producing element (i.e. element 9 of Figure 1) coupled to at least one of said masses (i.e. mass element 7)".

With respect to Applicant's arguments of claims 2, 3, 15 and 16. These claims are now objected.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Allowable Subject Matter***

4. Claims 2, 3, 15 and 16 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter that the prior art taken singly or in combination does not teach or fairly suggest limitation of claims 2 and 15 which includes (claim 2) the said geometric waveform selected from the list consisting

of: triangular, non-sinusoidal, and square; (claim 15) the geometric-waveform oscillator further comprising at least one damping element coupled with two anchoring points.

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUYEN Q. TRA whose telephone number is (571)272-2343. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky L. Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tuyen Q Tra/  
Examiner, Art Unit 2873

/Ricky L. Mack/  
Supervisory Patent Examiner, Art Unit 2873